



# BA-125

## Northwest Turtle Bay Marsh Creation

Industry Day  
May 6, 2014





# Northwest Turtle Bay Marsh Creation (BA-125)

760 Acres



Marsh Creation \*



Project Boundary

\*denotes proposed features



0.1 0 0.1 0.2  
Kilometers

0.1 0 0.1 0.2  
Miles

Map Produced by:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal Restoration Assessment Branch  
Baton Rouge, La.

Background Imagery:  
2010 NAIP Photography

Map Date: January 30, 2012  
Map ID: USGS-NWRC 2012-11-0008  
Data accurate as of: May 25, 2011

# FILL SITE DESIGN

## Construction Methodology

- Semi-confined placement
- Pipe will be moved frequently
- No dewatering structures
- Marsh will be at different elevations
- Previous projects show marsh that is sustainable with this construction method.



# FILL SITE DESIGN

## Containment Design

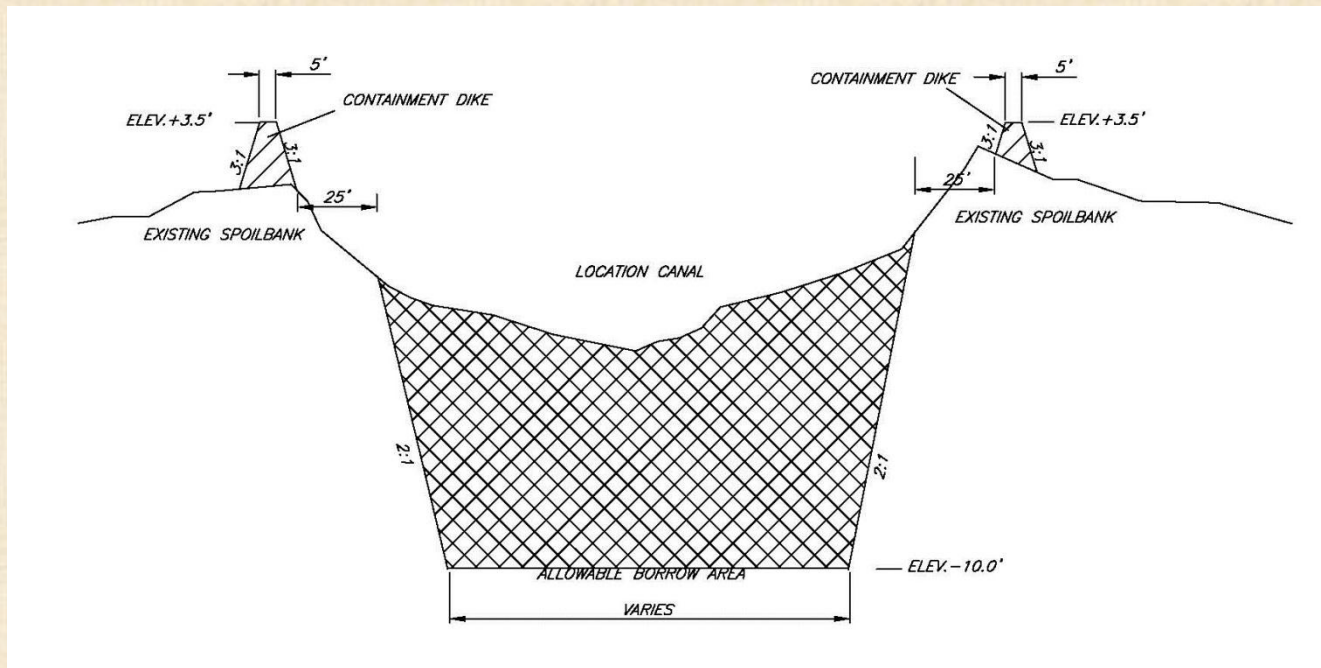


- Traditional earthen dikes for locations shallower than -3.0' where no pipelines exist.
- Sheet pile supported with earth fill for locations where mud line elevation is -3.0' or deeper
- Hay bale blocks in locations shallower than -2.0' where pipelines exist.

# FILL SITE DESIGN

## Containment Design

- Interior Containment
  - Prevent dredge material from entering oil and gas canals
  - Allow higher elevations at the center of the project

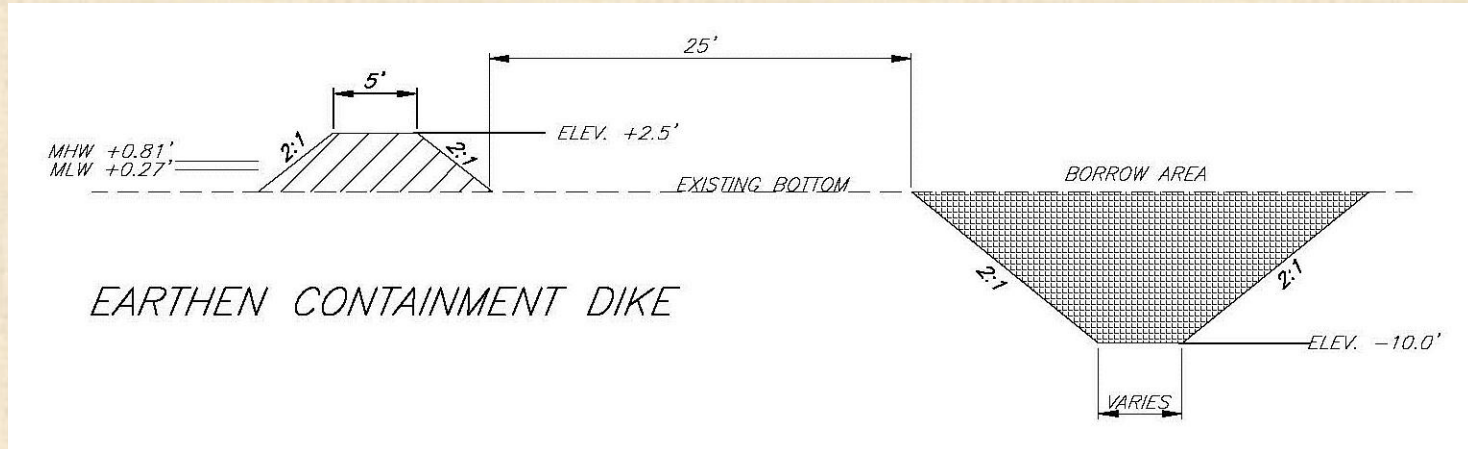


- 5' crown width
- +3.5' elevation
- 3:1 ss
- 33,730 lf
- 63,600 cy

# FILL SITE DESIGN

## Containment Design

### Earthen Closure:

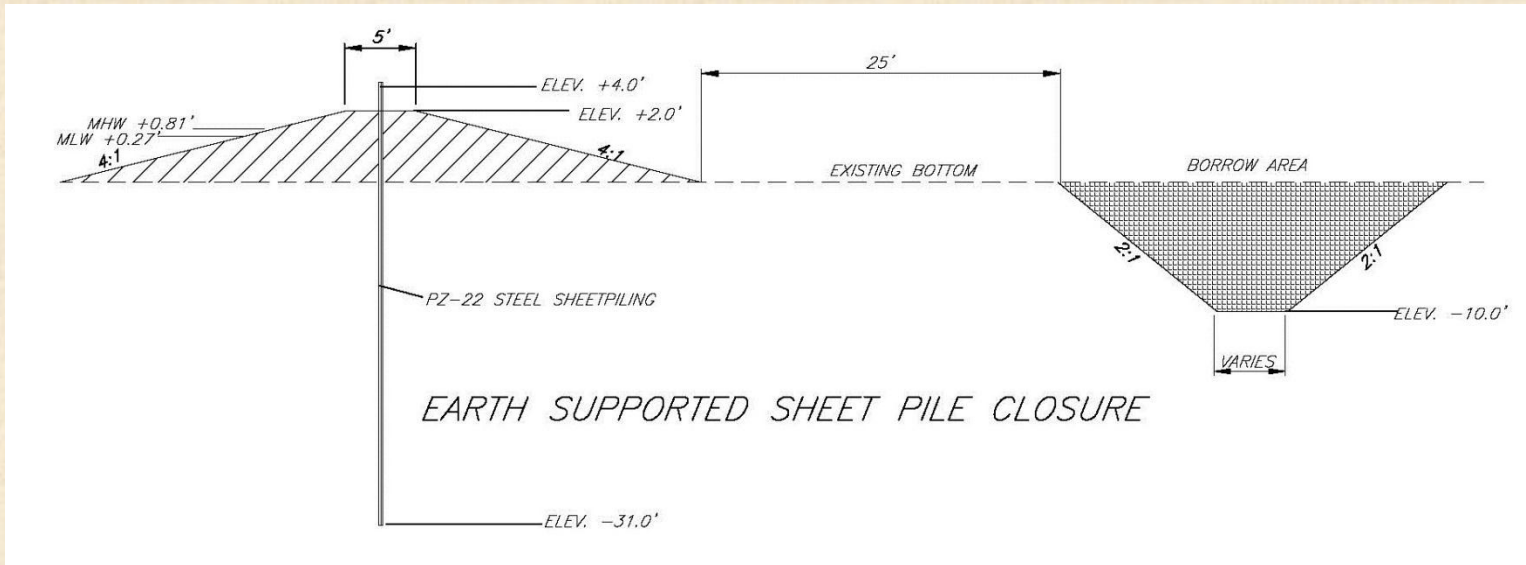


- 5' top width
- +2.5' elevation
- 2:1 side slopes
- 25' berm
- -10.0' borrow pit
- 13 closure locations
- 1,048 lf
- 3,938 cy

# FILL SITE DESIGN

## Containment Design

### Sheet Pile Closure:



#### Sheet Pile:

- PZ-22 steel sheet
- +4.0' top elevation
- 35' long sheets

#### Earthen Support:

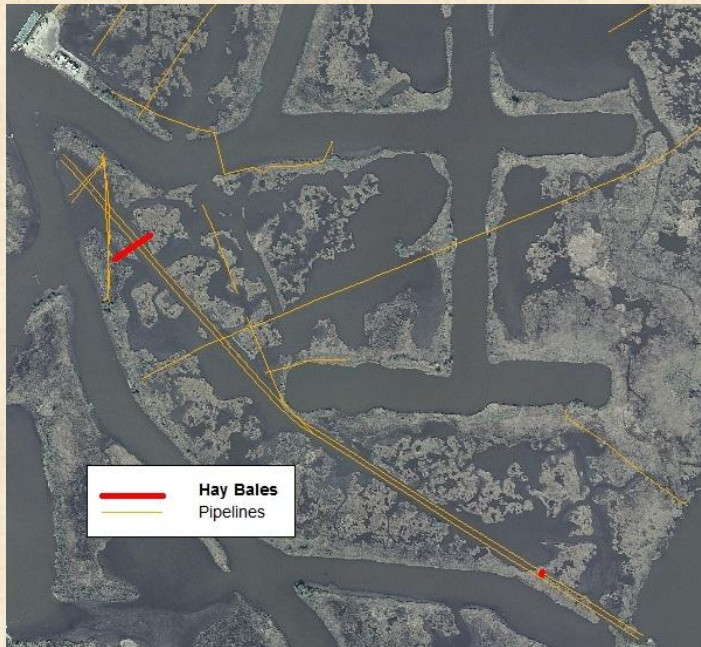
- 5' top width
- +2.0' elevation
- 4:1 side slopes
- 25' berm
- -10.0' borrow pit

- 2 locations
- 192 lf
- 3,386 cy

# FILL SITE DESIGN

## Containment Design

### Hay Bale Closures:



- 2 locations
- 240 lf

# FILL SITE DESIGN

## Marsh Creation



- 12 Fill Locations
- Max elevation at each location
- Not to exceed cubic yardage at each location

# FILL SITE DESIGN

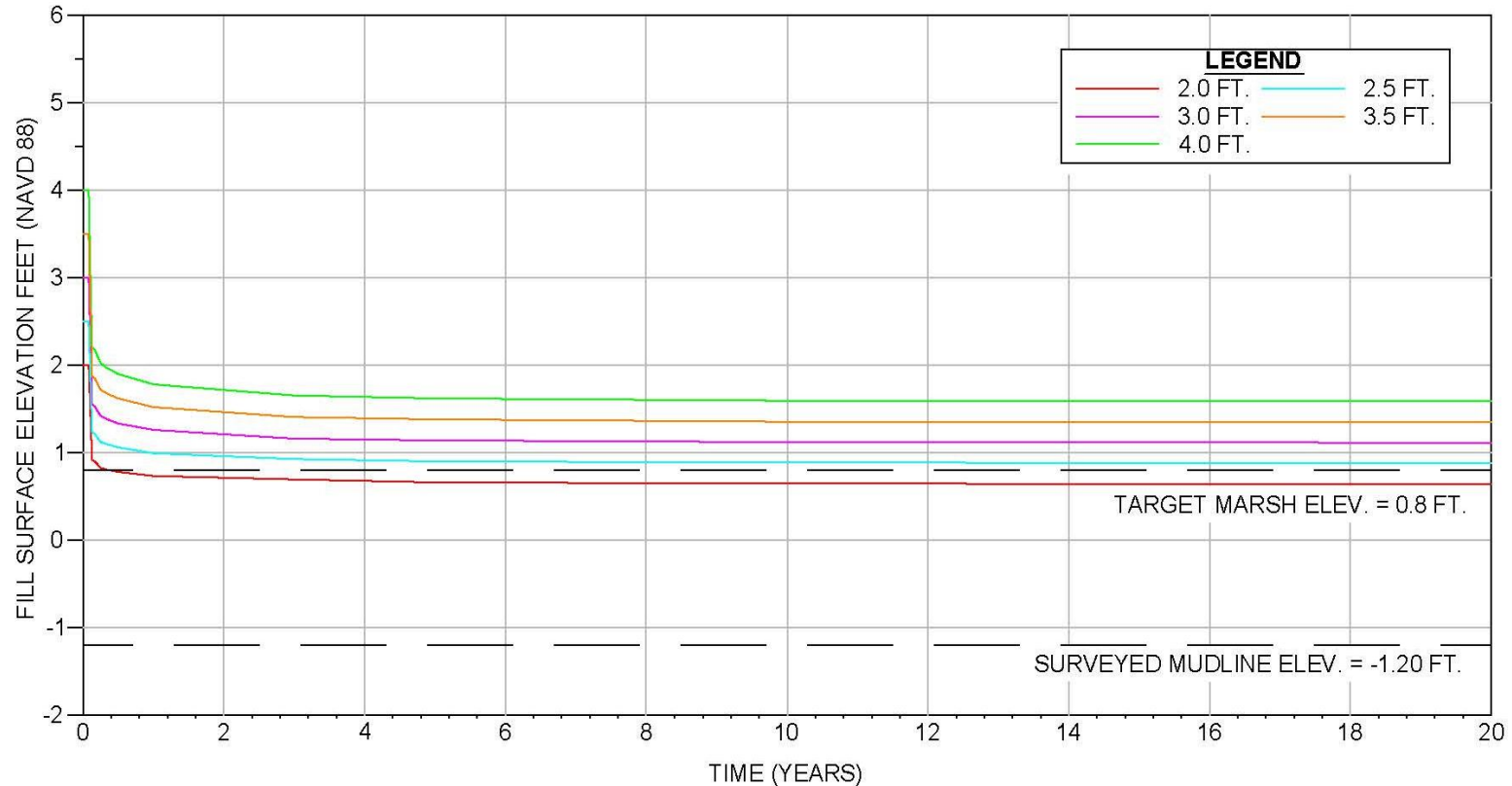
## Marsh Creation



- Potential Pipeline layout
- Initial conversations have begun with pipeline companies
- Crossing of pipelines will be minimized

# FILL SITE DESIGN

## Marsh Fill Settlement Analysis



ELEV.	30 DAYS (0.08 YEARS)	90 DAYS (0.25 YEARS)	0.5 YEAR	1 YEAR	3 YEAR	5 YEAR	10 YEAR	20 YEAR
2 FT.	2.00 FT.	0.83 FT.	0.78 FT.	0.73 FT.	0.70 FT.	0.66 FT.	0.65 FT.	0.64 FT.
2.5 FT.	2.50 FT.	1.12 FT.	1.06 FT.	1.00 FT.	0.93 FT.	0.90 FT.	0.88 FT.	0.88 FT.
3 FT.	3.00 FT.	1.42 FT.	1.34 FT.	1.26 FT.	1.16 FT.	1.14 FT.	1.12 FT.	1.12 FT.
3.5 FT.	3.50 FT.	1.72 FT.	1.62 FT.	1.52 FT.	1.41 FT.	1.38 FT.	1.36 FT.	1.35 FT.
4 FT.	4.00 FT.	2.03 FT.	1.90 FT.	1.78 FT.	1.65 FT.	1.62 FT.	1.59 FT.	1.59 FT.

### FILL SURFACE ELEVATION VS. TIME (BHMC-4)

BA-125 Northwest Turtle Bay Marsh Creation  
Jefferson Parish, Louisiana



Figure E-4

# FILL SITE DESIGN

## Volumes

- Fill elevation selected is AVERAGE and is used only to calculate a volume.
- Elevation will not be a uniform +2.5'. High spots at discharge locations and low spots near the marsh edge are expected.
- Estimated Volume: 3.0–3.7 MCY

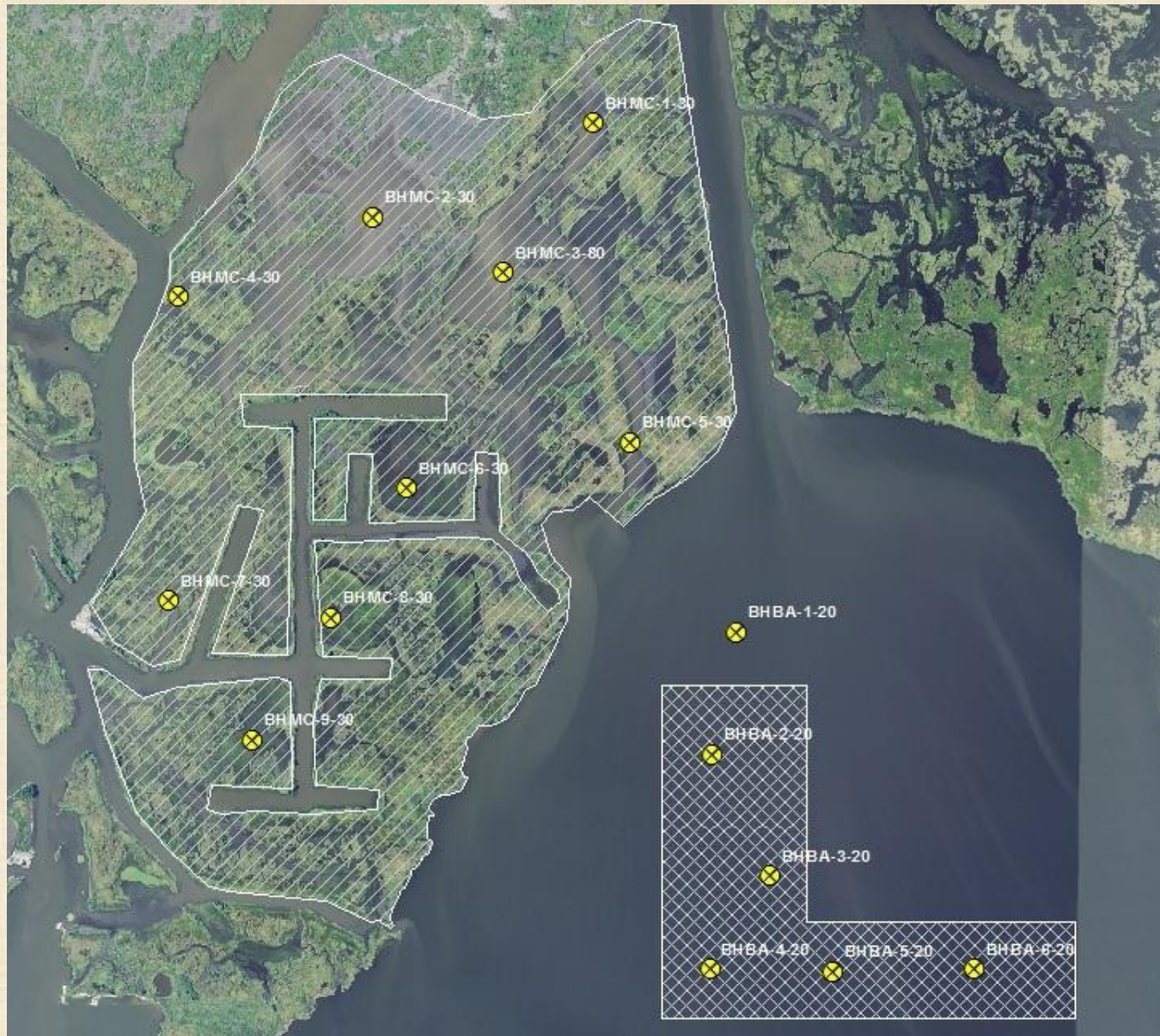
# PROJECT SCHEDULE

- 30% Design: March 2014
- 95% Design: October 2014
- Phase 2 Funding: December 2014

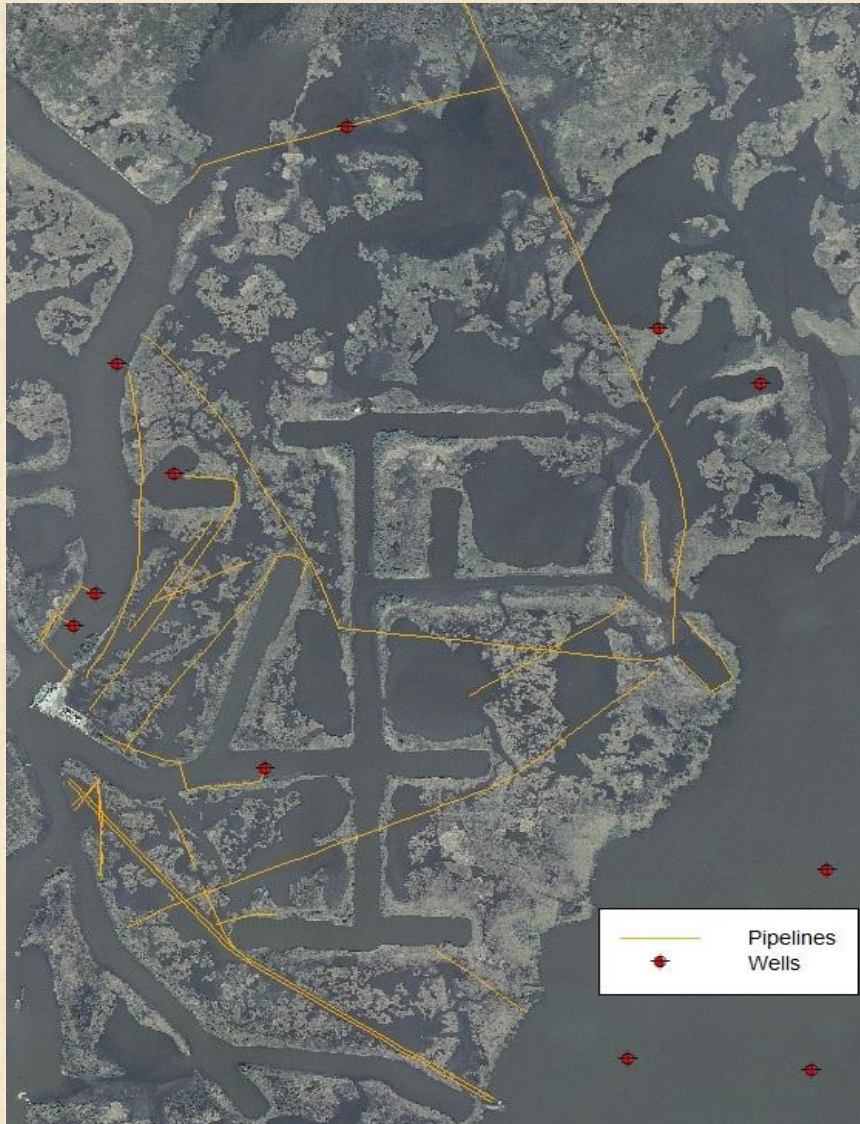
# QUESTIONS?



# Boring Locations



# Magnetometer Survey



- 23 Unknown or Abandoned Pipelines (2" – 4" flowlines)
- 9 Identified Pipelines
  - 5 Active
  - 12" and 16" Active Gulf South Pipelines Most Significant
- 6 Wells
  - 2 Plugged & Abandoned

## Expansion Area 1 - 2008 Photography

### Expansion Area 1

135 acres

61% water

39% marsh

262,000 yd<sup>3</sup>

ONE discharge location



## Expansion Area 1

Containment dikes

